REMARKS

Applicant respectfully requests reconsideration of this application in light of the amendments and remarks made herein. Claims 1-31 are voluntarily amended herein to correct certain instances of antecedent basis errors and to clarify the claimed invention.

In brief, the present claimed invention is directed to a data cartridge library having soft power capability for power consuming components comprised by the library. More specifically, soft power capability can provide enough power for the component(s) to reach a stable quiescent state before power is terminated or alternatively control power for a stable start-up. The library generally comprises a plurality of storage locations each capable of holding at least one data storage element, a data transfer interface for establishing a communication path between one of the data storage elements and host computer, a transport unit for moving one of the data storage elements between one of the storage locations and the data transfer interface, a power supply, a power switch and a power controller. The power controller is capable of monitoring the power switch for a transition between an ON and OFF state and upon detection of the transition controlling the application of power to the component.

Rejections Under 35 U.S.C. § 112

Claims 26 and 27 stand rejected under 35 U.S.C. § 112, second paragraph, "as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention." More specifically, claim 26 includes the term "CAN" network and claim 27 includes the term "IIC" network, purportedly rendering the claims indefinite.

Applicant has amended claim 26 to spell out the acronym "CAN" as "Control Area Network" and has amended claim 27 to spell out the acronym "IIC" as "Inter Integrated Circuit."

Rejections Under 35 U.S.C. § 102

Claims 1-6, 8-11, 15-19 and 23-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,429,470 to Nicol et al (hereinafter referred to as "Nicol").

Nicol is directed to an inter-system transport mechanism for moving data cartridges

between a first data storage assembly and a second data storage assembly of a robotic data cartridge handling system. The handling system comprises at least two storage assemblies each including an inventory control system for creating a current inventory of data cartridges in each storage assembly when the handling system is turned on. Once fully powered, the handling system is free to function in regularity with components therein functioning under normal operating duty cycles.

Nicol discloses an inter-system transport mechanism wherein a data cartridge is moved from the first storage assembly to the second via a pair of conveyor belts driven by a drive system all supported by an inter-system transport frame. As part of the normal functioning duty cycle of the inter-system transport mechanism, the drive system is activated by a source sensor assembly, generally comprised of photo-emitters and photo-detectors, which detects when a data cartridge has been inserted into the inter-system transport mechanism by a gripper mechanism. The conveyor belts are moved in the appropriate direction based on the sensor input to a MUC (i.e. from the first storage assembly to the second). The sensor assembly detects the data cartridge upon reaching its destination, i.e. to the second storage assembly or another inter-system transport mechanism, and sends a signal to the MUC to deactivate the drive system as part of the regular duty cycle of the transport system. The gripper mechanism is also controlled to function in various states controlled under the normal functioning duty cycles of the fully powered handling system.

In contrast, Applicant's claimed invention is directed to soft power that safely provides or terminates power to components in a library. As recited in amended independent claim 1, Applicant's magazine-based data cartridge library comprises "a power switch switchable between an ON state and an OFF state; and a power controller for monitoring said power switch for a transition between said ON state and said OFF state and after detecting said transition of said power switch between said ON state and said OFF state, controlling power applied to said component."

Nowhere does Nicol disclose a power switch switchable between an ON state and OFF state. Rather, Nicol discloses a fully powered handling system that controls the operation of components therein as part of the normal duty functions in the handling system. In other words, Nicol uses controller functionality to activate and deactivate components as needed when the handling system is in a fully powered state. In one example, Nicol controls

the movement of a conveyor system in an inter-system transport mechanism via feedback from photo-emitters 56, 58, 64 and 66 and corresponding photo-detectors 60, 62, 68 and 70. The controller can activate or deactivate the conveyor to move the cartridge forward/backwards or at different speeds. Examiner incorrectly analogizes language used by Nicol to describe normally controlled activity in components within a fully powered handling system such as "started", "activate" and "turned off" with Applicant's claimed power switch switchable between an ON state and OFF state. In fact, the only reference related to handling system power in Nicol is "When the robotic storage assemblies 10 are first powered on, or if one or more of the access doors 12 are opened, portions of the affected storage mechanisms 13 are inventoried to determine the location and identity of each of the stored data cartridges" (Column 8, lines 47-51).

Furthermore, Nicol fails to disclose "a power controller for monitoring said power switch for a transition between said ON state and said OFF state and after detecting said transition of said power switch between said ON state and said OFF state, controlling power applied to said component" as recited in Applicant's claim 1. Nicol discloses an inter-system transport controller 158 that monitors the position of a cartridge in the inter-system transport using photo sensors and detectors. Nicol does not monitor a power switch. Nicol discloses nothing about controlling power applied to a component when power is switched between an ON state and an OFF state. Because Nicol fails to disclose a controller that monitors a power switch (the power switch having a sole purpose to terminate or provide power) that is responsive to an ON or OFF transition of the power switch by controlling power applied to a component, it is clear that Nicol does not anticipate claim 1, and Applicant respectfully submits that claim 1 is allowable.

Dependent claim 2 depends directly from claim 1 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 2 recites, "said power controller comprises means for terminating the application of power to said component after a fixed amount of time has expired since detecting a transition of said power switch from said ON state to said OFF state." Nowhere does Nicol control terminating power to a component after a fixed amount of time has expired in response to detecting a power switch transitioning from ON to OFF. Nicol is not switching a power switch to an OFF state followed by an allowance of time to safely power off component(s); rather Nicol controls the normal duty activity of

component in a handling system fully provided with power with no contemplation of a time component. Because Nicol fails to disclose all of the features of claim 2, Applicant respectfully submits that claim 2 is also allowable.

Dependent claim 3 depends directly from claim 1 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 3 recites, "said power controller comprises means for terminating the application of power to said component after a variable amount of time has expired since detecting a transition of said power switch from said ON state to said OFF state." Nowhere does Nicol control terminating power to a component after a variable amount of time has expired in response to detecting a power switch transitioning from ON to OFF. Because Nicol fails to disclose all of the features of claim 3, Applicant respectfully submits that claim 3 is also allowable.

Dependent claim 4 depends directly from claim 1 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 4 recites, "said power controller comprises means for delaying the application of power to said component for a period of time after detection of a transition of said power switch from said OFF state to said ON state." Nowhere does Nicol control delaying power to a component for a period of time in response to detecting a power switch transitioning from OFF to ON. Because Nicol fails to disclose all of the features of claim 4, Applicant respectfully submits that claim 4 is also allowable.

Dependent claim 5 depends directly from claim 1 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 5 recites, "said power controller comprises means for sequencing a power output of said power supply with a second power output of a second power supply." Nowhere does Nicol disclose a second power supply, let alone a first power supply, with a second power output. Because Nicol fails to disclose all of the features of claim 5, Applicant respectfully submits that claim 5 is also allowable.

Dependent claim 6 depends directly from claim 1 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 6 recites, "said power supply comprises a power input interface for receiving power from a power source and a power output interface for providing power to components of the library." Nowhere does Nicol disclose a power input interface or a power output interface. Because Nicol fails to disclose all of the features of claim 6, Applicant respectfully submits that claim 6 is also allowable.

Dependent claim 8 depends directly from claim 1 which, as discussed above, is

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distinguishable over Nicol. Furthermore, claim 8 recites, "said power switch comprises an interface that allows an external device to transition said power switch between said ON state and said OFF state." Nowhere does Nicol disclose an external device transitioning power to a power switch having an interface to communicate with the external device. Because Nicol fails to disclose all of the features of claim 8, Applicant respectfully submits that claim 8 is also allowable.

Dependent claim 9 depends directly from claim 8 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 9 recites, "said interface comprises a host computer interface that allows said host computer to transition said power switch between said ON state and said OFF state." Nowhere does Nicol disclose a host computer transitioning power to a power switch having an interface to communicate with the host computer. Because Nicol fails to disclose all of the features of claim 9, Applicant respectfully submits that claim 9 is also allowable.

Dependent claim 10 depends directly from claim 8 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 10 recites, "said interface comprises an uninterruptible power supply interface that allows an uninterruptible power supply to transition said power switch from said ON state to said OFF state." Nowhere does Nicol disclose an uninterruptible power supply providing transition power. Because Nicol fails to disclose all of the features of claim 10, Applicant respectfully submits that claim 10 is also allowable.

Claim 11 features "a power supply for providing power to a component of the library; a power switch switchable between an ON state and an OFF state; a power controller for monitoring said power switch for a transition from said OFF state to said ON state and, after detecting said transition of said power switch from said OFF state to said ON state, delaying power applied to said component for a period of time after detection of said transition of said power switch from said OFF state to said ON state." Nowhere does Nicol disclose a power switch switchable from OFF to ON. Nowhere does Nicol disclose a power controller for monitoring a power switch for an OFF/ON transition. Nowhere does Nicol disclose delaying power applied to a component for a period of time after the OFF/ON transition has been detected. Because Nicol fails to disclose all of the features of claim 11, Applicant respectfully submits that claim 11 is also allowable.

With regard to claims 15-17, which the Examiner states are rejected over Nicol, Applicant notes that the Office Action is devoid of any explanation as to how Nicol anticipates the subject matter of these claims and thus is deficient for failing to provide "notification of the reasons for rejection and/or objection together with such information and references as may be useful in judging the propriety of continuing the prosecution[.]" M.P.E.P. § 707. Nonetheless, in the interest of expediting prosecution, Applicant has reviewed Nicol and attempted to traverse any potential rejection of claims 15-17.

Claim 15 depends from claim 11 which, as discussed above, is distinguishable over Nicol. Additionally, claim 15 recites that the "power controller is adapted to cause a delay in the application of power to said component" after detecting the transition of the power switch. As discussed earlier, Nicol at least fails to describe the claimed power switch, the claimed power controller, and the power delay described in claim 15. As such, Applicant respectfully submits that claim 15 is allowable.

Claim 16 depends from claim 11 which, as discussed above, is distinguishable over Nicol. Additionally, claim 16 recites that the "power controller is adapted to cause a delay in the application of power to said component by controlling an output of said power supply." Nichols also fails to teach this additional element, and Applicant therefore respectfully submits that claim 16 is allowable.

Claim 17 depends directly from claim 11, and is thus believed allowable for the reasons discussed in connection with claim 11. Claim 17 also recites that the "power controller is adapted to cause said delay in the application of power to said component by communicating with said component via a network." Nicol fails at least to disclose a power controller, let alone one that communicates with a component over a network. As such, Applicant respectfully submits that claim 17 is allowable.

Claim 18 features "a power supply for providing power to a component of the library; a <u>power switch switchable</u> between an ON state and an OFF state; a <u>power controller for monitoring</u> said power switch for a transition from said ON state to said OFF state and after detecting said transition of said power switch from said ON state to said OFF state, <u>issuing a power termination message</u> to said component concerning termination of power applied to said component." Nowhere does Nicol disclose a power switch switchable from ON to OFF, a <u>power controller</u> for <u>monitoring a power switch</u> for an ON/OFF transition or <u>issuing a</u>

power termination message to a component. Because Nicol fails to disclose all of the features of claim 18, Applicant respectfully submits that claim 18 is also allowable.

Dependent claim 19 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 19 recites, "said power controller comprises means for terminating the application of power to said component after a fixed amount of time has expired since issuing said power termination message to said component." Nowhere does Nicol disclose a means for terminating power after a fixed amount of time after issuing a power termination message. Because Nicol fails to disclose all of the features of claim 19, Applicant respectfully submits that claim 19 is also allowable.

Applicant understands that the subject matter of that claim has been found allowable (Office Action at page 8). Nonetheless, since claim 20 is listed in the Examiner's rejection section (Office Action at page 6), Applicant distinguishes claim 20. Dependent claim 20 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 20 recites, "said power controller comprises means for terminating the application of power to said component after a variable amount of time has expired since issuing said power termination message to said component." Nowhere does Nicol disclose a means for terminating power after a variable amount of time after issuing a power termination message. Because Nicol fails to disclose all of the features of claim 20, Applicant respectfully submits that claim 20 is also allowable.

With regard to claims 23-30, the Office Action fails to describe where or how Nicol anticipates the subject matter of these claims. Nevertheless, Applicant again distinguishes claims 23-30 from Nicol in an abundance of caution and to expedite prosecution.

Dependent claim 23 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 23 recites, "said power supply provides power to said power controller independent of supplying power to said components." Nowhere does Nicol disclose a power supply supplying power to a power controller independent to supplying power to components. Because Nicol fails to disclose all of the features of claim 23, Applicant respectfully submits that claim 23 is also allowable.

Dependent claim 24 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 24 recites, "said power controller comprises non-volatile data storage for storing a boot-strap program." Nowhere does Nicol disclose a

power controller comprising <u>non-volatile data storage</u>. Because Nicol fails to disclose all of the features of claim 24, Applicant respectfully submits that claim 24 is also allowable.

Dependent claim 25 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 25 recites, "said power controller comprises a network for communicating with said component." Nowhere does Nicol disclose a <u>power controller</u> or a <u>network</u> comprised by a power controller. Because Nicol fails to disclose all of the features of claim 25, Applicant respectfully submits that claim 25 is also allowable.

Dependent claim 26 depends directly from claim 25 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 26 recites, "said <u>network</u> comprises a <u>Control Area Network</u>." Nowhere does Nicol disclose a <u>power controller</u> or a <u>Control Area Network</u> comprised by a power controller. Because Nicol fails to disclose all of the features of claim 26, Applicant respectfully submits that claim 26 is also allowable.

Dependent claim 27 depends directly from claim 25 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 27 recites, "said network comprises an <u>Inter Integrated Circuit network</u>." Nowhere does Nicol disclose a <u>power controller</u> or a <u>Inter Integrated Circuit network</u> comprised by a power controller. Because Nicol fails to disclose all of the features of claim 27, Applicant respectfully submits that claim 27 is also allowable.

Dependent claim 28 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 28 recites, "said power controller comprises <u>means for monitoring power output</u> by said power supply." Nowhere does Nicol disclose <u>monitoring power output</u> by a power supply. Because Nicol fails to disclose all of the features of claim 28, Applicant respectfully submits that claim 28 is also allowable.

Dependent claim 29 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 29 recites, "a <u>second power supply</u> for providing power to a second component of the library; and a <u>slave power controller</u> for receiving a <u>master-slave message</u> from said <u>power controller</u>, wherein said slave power controller controls the application of power to said second component of the library after receiving said master-slave message from said power controller." Nowhere does Nicol disclose a <u>second power supply</u>, a <u>slave power controller</u>, or a power controller capable of sending a <u>master-slave message</u> to the slave power controller. Because Nicol fails to disclose all of the features of claim 29, Applicant respectfully submits that claim 29 is also allowable.

Dependent claim 30 depends directly from claim 18 which, as discussed above, is distinguishable over Nicol. Furthermore, claim 30 recites, "said master-slave message comprises said termination message." Nowhere does Nicol disclose a master-slave message comprising a termination message. Because Nicol fails to disclose all of the features of claim 30, Applicant respectfully submits that claim 30 is also allowable.

Claim 31 features a method for "a power supply for providing power to a component of the library, and a power switch switchable between an ON state and an OFF state; monitoring said power switch for a transition between said ON state and said OFF state; and controlling power applied to said component after detecting said transition between said ON state and said OFF state." Nowhere does Nicol disclose a power switch switchable between ON to OFF. Nowhere does Nicol disclose monitoring a power switch or controlling power applied to a component after detecting a transition of the switch. Because Nicol fails to disclose all of the features of claim 31, Applicant respectfully submits that claim 31 is also allowable.

Claim Objections

According to the Office Action, claims 7, 12-14, 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Dependent claim 7 depends directly from claim 1, claims 12-14 depend directly or indirectly from independent claim 11, claims 20-22 depend directly or indirectly from independent claim 18 which, as discussed above all distinguish over Nicol because Nicol fails to disclose at least all of the features in the base claims, and therefore Applicant submits claim 7 is allowable being dependent from claim 1, claims 12-14 are allowable being dependent from claim 11 and claims 20-22 are allowable as being dependent from claim 18.
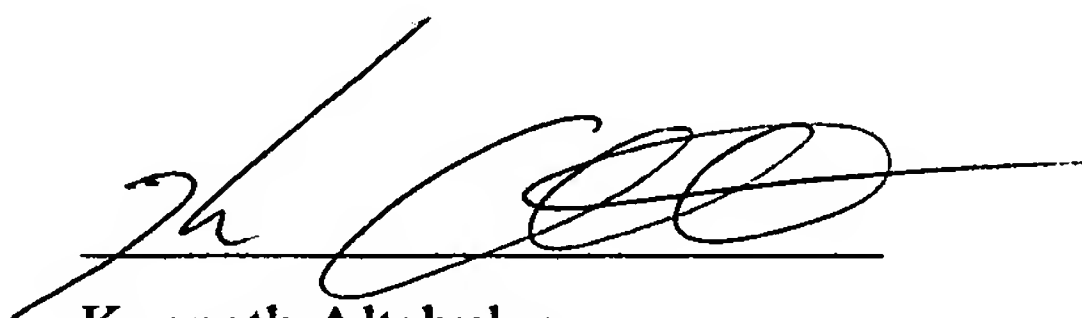
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Authorization To Charge Necessary Fees

The Commissioner is hereby authorized to charge any additional necessary fees associated with this submission, or credit any overpayment, to Deposit Account No. 50-0289.

Respectfully submitted,

Dated: 2/13/06

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